SCOTTSDALE INSTITUTE CHIEF INFORMATION OFFICERS SPRING SUMMIT

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EHR Value Realization – Rx for Success

Prepared by Tonya Edwards, Impact Advisors

Executive Summary: CIOs from thirteen leading healthcare organizations convened in April 2017 for the annual Scottsdale Institute Spring Conference CIO Summit. This session, a follow up to the full conference session, "Prove that EHRs Add Value," examined how EHRs are providing value to healthcare organizations, some of the primary challenges and barriers for realizing value, and the key organization relationships to ensure success.

CIO SUMMIT PARTICIPANTS

> George Conklin – CHRISTUS Health

> Robert Eardley – Houston Methodist

> Mark Lantzy – IU Health

> Ken Lawonn – Sharp HealthCare

> Mark McMath – Methodist Le Bonheur Healthcare

> Patrick O'Hare – Spectrum Health

> Cecilia Page – UK HealthCare

> Rich Pollack – VCU Health

> Chuck Scully – HonorHealth

> Bruce Smith – Advocate Health Care

> Tim Thompson – BayCare Health System

> Joel Vengco – Baystate Health

> Jim Veline – Avera

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Introduction

The healthcare industry has spent billions of dollars on electronic health record systems across the past few years, but not all organizations are seeing meaningful returns on their investments.

A 2012 **study** by the National Board of Economic Research (NBER) revealed that hospitals that invested in advanced EMRs and did not have the expertise to innovate to improve operations wound up increasing their overall costs by 6%, even after several years. In contrast however, some leading hospitals were able to realize substantial, sustained improvements in clinical and financial metrics as a result of their EHR investments. Similarly, in an Impact Advisors **2015 survey of CHIME members**, almost 60% of respondents said that investing in an EHR had not helped their organization achieve their productivity and efficiency goals. In short, they had not realized value from their huge EHR capital investment.

Evidence is mounting that winners in the new paradigm of value-based payment will have to succeed in all quadrants of the "Quadruple Aim" by improving quality, decreasing cost and improving patient and provider satisfaction. To attain the full benefit of EHR adoption, healthcare organizations need to change processes, culture, and behavior—innovations for which an operational EHR system is a necessary, but not sufficient, ingredient to create value independently.

In this session, which closely followed the full conference session, "Prove that EHRs Add Value," we asked CIOs from some of the nation's leading healthcare institutions to give some examples of how EHRs are providing value to their healthcare organizations as well as to describe some of the primary challenges and barriers for realizing value and the key organizational relationships to ensure success.

EXAMPLES OF VALUE REALIZATION SUCCESS

We started by asking the group about their experience of value realization from implementing an EHR. Immediately CIOs around the room provided examples of specific use cases in which EHR implementation and optimization provided significant value to their organizations and the patients they serve.

Mark McMath, Methodist Le Bonheur, shared significant work around sepsis that his organization has done. In partnership with Apple, they have developed tools that coordinate with the EHR such that as the patient is being screened for sepsis there is a dashboard tracking multiple measures and an algorithm is used to determine which patients are developing sepsis. An alert is sent to appropriate providers via
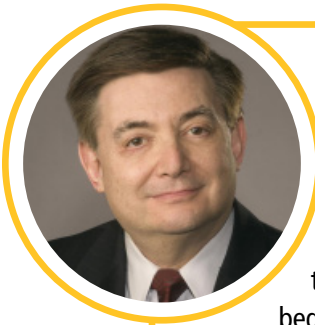
> "Similar programs [using devices like Apple Watch] have been instituted across the industry, resulting in hundreds of thousands of lives saved."
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> – **Mark McMath**, SVP and CIO, Methodist Le Bonheur Healthcare

Apple Watch. The result is that response time for treating patients with sepsis has been reduced from hours to minutes. He notes that similar programs have been instituted across the industry, resulting in hundreds of thousands of lives saved.

Rich Pollack from VCU Health, which uses Cerner as their EHR platform, reports that his healthcare system has been using an early warning system in the ICU. It creates a dashboard to monitor critical data with an algorithm that identifies patients who are deteriorating and alerts the rapid response team. "This has resulted in a dramatic reduction in codes in the ICU as well as outside of the ICU. Prior to the EHR and implementation of these tools the rapid response team relied on caregivers at the bedside noticing the deterioration of a patient and calling the rapid response team, which was much less effective."

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— **Rich Pollack**, VP and CIO, Virginia Commonwealth University Health

Jim Veline, Avera, reports that drug seekers now have to drive for many miles away from his health system's emergency departments to get drugs. They have instituted sharing of data across Avera facilities as well as neighboring health systems to clamp down hard on drug seekers as well as identify physicians who are overprescribing controlled substances. They share real-time data on prescriptions written and medications filled via Surescripts. The data-sharing program has been able to bend the curve on provider overprescribing and has significantly reduced the number of drug seekers in their emergency departments.

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— **Jim Veline**, SVP and CIO, Avera Health

Baystate Health's Joel Vengco notes that his systems' EHR has provided a lot of value to patients. They have implemented Open Notes through the patient portal so that the comprehensive record can get into patients' hands. He also notes that the EHR has provided in value in many other ways including allowing digital communication with physicians, digitizing prescriptions to eliminate errors and allowing prescriptions to be directly transmitted to the pharmacy.

George Conklin, CHRISTUS Health, cautions however about being able to tease out the value that the EHR itself actually provides, versus the value that process improvement provides. CHRISTUS is an international Catholic, faith-based, not-for-profit health system that provides services in Texas, Arkansas, Louisiana, Georgia, and New Mexico in the U.S as well as in Colombia, Chile and Mexico. He notes that CHRISTUS has been a top-decile performer in harm indices both in its

U.S. facilities as well as internationally. The U.S. facilities are all on an EHR platform, however the facilities in Colombia, Chile and Mexico remain on a mix of paper and electronic records. They have finely honed people and processes that allow them to be highly successful despite the lack of significant technology enablers. The value the EHR provides, however, is in the automation of the collection of data for reporting and managing clinical care. In those facilities without an EHR the work of collecting data for care management and reporting is mainly manual and so consumes significant staff energy and time to collect; these facilities cannot also easily implement new programs that are more easily effected at hospitals with EHRs.

CHALLENGES AND BARRIERS TO VALUE REALIZATION

Not all of the successes have been easy. Even at these leading organizations, challenges and barriers to value realization abound.

SPECTRUM HEALTH

"To be successful, it will be necessary to continuously monitor for workarounds and deviation from standard processes."

– **Patrick O'Hare**, SVP Facilities and CIO, Spectrum Health

Patrick O'Hare, Spectrum Health, notes that one of the biggest challenges his organization has faced as it implements Epic is being organizationally disciplined enough to drive high-level standardization. He notes that organizational standardization, at least to the level it makes sense, is a critical factor in realizing value. A corollary to this is having in place systems to maintain standards once the EHR is deployed. "To be successful, it will be necessary to continuously monitor for workarounds and deviation from standard processes."

Advocate's Bruce Smith notes, "Adoption is still a big issue. Some doctors opt out even now a decade after implementation. We can't get optimal value until our people are all pulling in the same direction." He notes that having physician leaders recognize this need and support the appropriate use of EHRs by their peers will be necessary to get there.

Advocate Health Care

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– **Bruce Smith**, SVP and CIO, Advocate Health Care

Chuck Scully notes that his system, HonorHealth, has just completed a new merger and standardized on a single Epic EHR platform. "Doing things in a health-system, standard-system way is a new thing," he notes. This has brought up many conversations about what the role of leadership should be in an information system era. "We need to have more discussion about what the middle tier of leadership should be doing. They will need to truly understand what

the workflow is supposed to be for the people they manage. Ultimately, they need to have a major role in adoption and standardization. IT cannot make it happen. This is their tool."

CHRISTUS Health

"Our next level of training is around how to use information…reporting and analytics. We have a broad array of self-service tools. We need to give managers real life examples of how to use the system. We are training them how to run the reports themselves."

– George Conklin, SVP and CIO, CHRISTIS Health

George Conklin agrees. He notes that at CHRISTUS managers are required to be trained and certified in systems. If leaders do not take training they are called out to their bosses. "Our next level of training is around how to use information… reporting and analytics. We have a broad array of self-service tools. We need to give managers real life examples of how to use the system. We are training them how to run the reports themselves." Rich Pollack notes however that many managers have little data literacy. They recognize that this is a problem and are trying to figure out how to build a training program around that. At Spectrum, notes Patrick O'Hare, they have implemented an eMBA for their internal leaders that focuses on how technology can enable operations and has a particular focus on analytics.

Many of the CIOs lament that current EHRs are not designed well to support the way physicians work. Some of those challenges are around documentation. Cecilia Page DNP, UK HealthCare notes that documentation audits are key to help improve documentation and meet regulatory requirements.

UK HealthCare

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– Cecilia Page, DNP, CIO, UK HealthCare

Many documentation templates were developed in a siloed way that doesn't work as well for the team-based care developing today. Others agree that documentation is a big challenge and one that is made worse by regulations for billing. A significant amount of time is spent in physician and nursing documentation, and efforts need to be focused on efficiencies in documentation to promote utilization of the electronic health record as a tool for the future.

Physicians need to be able to capture as much data in the note automatically as they can, while still being able to easily convey key narrative elements, the patient story, in an efficient and effective way. Says Rich Pollack, "We need to provide physicians with easy ways to complete an essential narrative component to tell the story and automate pulling in structured data." George Conklin goes on to say that as we balance the need for physicians to tell the story in a narrative way and the need to capture structured data, voice recognition and improvements in natural language processing to extract out data will be very helpful. Products like Microsoft Azure and IBM Watson are getting very close to that.

Joel Vengco notes that a major challenge CIOs face is that "even the simplest structured data today is still not standardized, either across vendors or within vendors as they have implemented over time." He notes, "we are trying to innovate on top of our EHR and create new workflows or new ways to see information to improve situational awareness rather than having silos of data." But he goes on to say that not having data standards is a big barrier.

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> – **Joel Vengco**, VP and CIO, Baystate Health

As always, interoperability arose as a major barrier for achieving value from the EHR. George Conklin notes that he believes it is fiduciarily irresponsible to have to convert EHRs every time you acquire a hospital. He is deeply involved nationally in leading the push toward interoperability and standardization of data.

Proving Value

When it comes to proving value from the EHR itself, many of the CIO participants note that they are not being asked to do so. Robert Eardley, Houston Methodist, notes that at this point the EHR is considered infrastructure, or a cost of doing business. Certainly, the system expects to get value from the EHR, but he is not being pushed to provide hard dollar return on investment. Patrick O'Hare notes, "teasing out the EHR value versus people and

> "At this point the EHR is considered infrastructure, or a cost of doing business. Certainly, the system expects to get value from the EHR, but I'm not being pushed to provide hard dollar return on investment."
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> – **Chuck Scully**, SVP and CIO, HonorHealth

process is just too difficult. The cost of the EHR is imbedded in operational cost. It is a cost of doing business… IT tools are used to help achieve quality. The measure for value is that we are hitting our metrics…we don't go back and tease it out." Chuck Scully agrees. "After implementation (especially when driven by merger standardization) no one really cares much about precisely measuring ROI versus estimated. We do care about maximizing the

benefits of the investment (economic, patient safety, patient experience…) but measurement against a three-year-old assumption set is a low priority." Others agree that the EHR and other technology is supportive of people and process changes.

Mark Lantzy, IU Health, notes that he is new to healthcare. At his previous firm, a healthcare insurance company, "IT was 100% driven by ROI. We were required to prove efficiencies were achieved and added value." Many

IU Health

"IT was 100% driven by ROI [in my previous role at a health insurer.] We were required to prove efficiencies were achieved and added value."

– **Mark Lantzy**, SVP and CIO Indiana University Health

agree that the same used to be true in healthcare provider systems, however the advent of meaningful use tended to reduce the focus on ROI. Still, some organizations have more of a focus than others and CEOs continue to look for value from technology investments. Mark McMath notes that because of this "when we innovate, we have to be willing to stop something if it was supposed to have an ROI but it doesn't. Patrick O'Hare notes that in fact the Spectrum Health insurance arm is much more diligent on ROI from IT investment than its delivery side. Overall, CIOs agree that there is still very strong interest in realizing value from IT investments but not for academic reasons of ROI but rather for reducing operating costs and improving patient safety and quality.

Key Relationships to Ensure Value Realization Success

All CIOs agreed that the key to success in driving value from the EHR is a tightly integrated relationship with operations. The exact relationships may vary from organization to organization but the concept remains the same. "The operational leaders are integral to ensuring that the people and process portions are living up to their obligations," says George Conklin. Robert Eardley agrees. He notes that at Houston Methodist IT may fund the project, but it is up to business owners to present the business case to their multidisciplinary governance team, including the CFO, that makes project decisions. About one in five are asked to report back on results after about six months live.

Others agree. Mark McMath notes that at Methodist Le Bonheur a proposal must have a sponsor at the senior level and a funding source in order to be approved. He also notes that in addition to direct relationships with operations, IT also works closely with their innovation team. Rich Pollack notes that VCU operates similarly. "That helps craft ownership by operations for adoption."

Ken Lawonn, SVP and CIO, Sharp HealthCare

Tim Thompson, BayCare Health System

Conclusion

Whether or not the healthcare system requires careful attention to hard ROI from implementation of EHRs it is clear that today's CEOs expect EHRs to assist their organizations in driving value. But deriving value from the EHR is no easy task and not all elements required to achieve value are within the CIO's control. That said, there are a number of things that CIOs can do to help their health systems achieve value from EHRs. Some include:

> **Insist on use cases** – Require a use case/business case for each new project or software acquisition.

> **Strengthen relationships with operations** – Operations will ultimately need to own workflows and adoption. You need them to drive value from IT.

> **Educate operational leaders** – These leaders need to understand how the IT systems should work for the people they manage as well as how to turn data into information they can use to improve operations.

> **Develop systems to maintain standard workflows and processes** – The extraordinary time and effort spent during implementation to standardize processes can be wasted time if efforts are not made to sustain standardized workflows and processes. Spend the time and effort necessary to put auditing and other tools in place to ensure adherence and work with operational leaders to provide feedback to end users.

> **Engage physician leaders to drive physician adoption** – Physicians respond to peer pressure much more than to operational leaders that "don't understand what we do." Utilize physician leaders to influence their peers.

> **Develop a vendor-relationship team** – This multidisciplinary team should continually work with vendors to drive improved EHR usability to support workflows, documentation and interoperability.

> **Get involved outside of your organization** – Many organizations are a part of the drive to seek relief from regulatory burdens for documentation and improve data standards and interoperability. Be a voice representing your health system and the industry and encourage others to do so as well.

> **Be an advocate for systemization and standardization** – Ultimately system standards need to be driven by operations, but CIOs can constantly beat the drum to focus sustained attention on the need to do this to drive value.

> **Monitor the success of projects** – Requiring projects to "prove" value in order to justify sustaining the project focuses the attention of both IT and operations on project success.

Given the current political climate, there is much uncertainty about the future of healthcare payment systems. What seems clear though is that the drive to value will continue and CIOs will be asked, just as their operational counterparts, to find ways to cut costs, improve quality and safety as well as improve customer and provider experience. Challenges abound, but a few concrete steps can pave the way for success.

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